

ABSTRACT

For determining the exhaust gas recirculation mass flow and the exhaust gas recirculation rate of an internal combustion engine (1) dependent on this, it is proposed, while said internal combustion engine (1) is in operation, to adapt a characteristic curve, determined before said internal combustion engine (1) is initially started up, representing the cylinder mass flow (dm_{zyl}) supplied to the cylinders of said internal combustion engine (1), which is composed of the fresh air mass flow (dm_{HFM}) and the exhaust mass flow recirculated via an exhaust gas recirculation pipe (16), to said fresh air mass flow (dm_{HFM}), known for various operating points of said internal combustion engine. The exhaust gas recirculation mass flow (dm_{AGR}) is then determined as a function of said fresh air mass flow (dm_{HFM}), measured at a particular transient operating point of said internal combustion engine, using the adapted characteristic curve of said cylinder mass flow (dm_{zyl}).